



**PATENT APPLICATION**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Tatsuo KOBAYASHI

Application No.: 10/607,128

Filed: June 27, 2003

Docket No.: 116378

For: INTERNAL COMBUSTION ENGINE OF COMPRESSING AND AUTO-IGNITING  
AIR FUEL MIXTURE AND METHOD OF CONTROLLING SUCH INTERNAL  
COMBUSTION ENGINE

**PETITION UNDER 37 C.F.R. §1.53(e)(2) - THE APPLICATION WAS COMPLETE  
AS FILED ON OCTOBER 14, 2003**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This Petition is submitted in response to the May 28, 2004 Notice of Omitted Items in a Non-Provisional Application (copy attached). For the reasons discussed in detail below, this Notice is in error because this application as filed on June 27, 2003 included page 74 of the specification (copy attached).

**Background**

This application, including 88 pages of a specification, claims, drawings, Declaration, Assignment and Application Data Sheet, was filed in the U.S. Patent and Trademark Office on June 27, 2003. Attached to this communication as Appendix A is a copy of the U.S. Patent and Trademark Office Acknowledgement of Receipt bearing the data stamp of June 27, 2003. Furthermore, attached to this communication as Appendix B is a copy of the U.S. Patent and Trademark Office postcard. Please note that both the Acknowledgement of

Receipt and the postcard indicate that 88 pages of the specification were included with the application as filed.

Page 74 was part of the 88 pages. If page 74 was missing, only 87 pages would have been filed. However, the U.S. Patent and Trademark Office twice acknowledged receipt of 88 pages.

In view of the foregoing, it is respectfully submitted that page 74 was originally filed in the U.S. Patent and Trademark Office on June 27, 2003, and that page 74 was subsequently misplaced.

**Relief Requested**

The U.S. Patent and Trademark Office is respectfully requested to: 1) withdraw the Notice of Omitted Items; 2) acknowledge that page 74 was received on June 27, 2003; and 3) accord this application a filing date of June 27, 2003, including page 74.

For the convenience of the Patent Office, a copy of page 74 is attached so that the complete application can be processed for substantive examination.

\* \* \* \*

Attached is our check number 156726 in the amount of \$130 for the petition fee under 37 C.F.R. 1.17(h). Furthermore, the U.S. Patent and Trademark Office is authorized to debit Deposit Account Number 15-0461 in the amount necessary to effect the filing of this Petition. However, it is respectfully submitted that the petition fee should be refunded because of the Patent Office error.

The appropriate official of the U.S. Patent and Trademark Office is invited to contact the undersigned if there are any questions regarding this matter.

Respectfully submitted,



James A. Oliff  
Registration No. 27,075

Thomas J. Pardini  
Registration No. 30,411

JAO:TJP/emt

Attachments:

Appendix A - Copy of U.S. PTO Acknowledgement  
of Receipt dated October 14, 2003  
Appendix B - Copy of U.S. PTO Postcard  
Copy of Notice of Omitted Item  
Copy of Page 87 of Specification

Date: July 28, 2004

**OLIFF & BERRIDGE, PLC**  
**P.O. Box 19928**  
**Alexandria, Virginia 22320**  
**Telephone: (703) 836-6400**

DEPOSIT ACCOUNT USE AUTHORIZATION Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461
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132, the supercharged air-fuel mixture is flown into the combustion chamber to scavenge the combustion gas remaining in the combustion chamber. The exhaust valve 134 is closed after discharge of the combustion gas from the combustion chamber is mostly completed. The intake valve 132 is then closed at a timing when the pressure in the combustion chamber is supercharged. This series of operations is repeated. The premix compression ignition combustion under the high loading conditions with no occurrence of knocking simultaneously and significantly reduces the emission of the air pollutants and the fuel consumption.

[0176] In the structure of the second embodiment described above, gasoline is injected from the fuel injection valve 15 into the intake conduit 12, whereas the fuel of a high octane value, such as hydrogen gas, is injected from the fuel injection valve 14 into the combustion chamber. In one modified structure, gasoline may also be injected directly from the fuel injection valve 19 disposed in the combustion chamber. In this modified structure, the fuel is directly injected into the combustion chamber at one of timings shown in Figs. 23 and 24. Fig. 23 shows timings in the 4-cycle drive mode, Fig. 24A shows timings under the low loading conditions in the 2-cycle drive mode, and Fig. 24B shows timings under the high loading conditions in the 2-cycle drive mode. As shown in Fig. 23, in the 4-cycle drive mode, gasoline is injected from the fuel injection valve 19 into the



**PTO RECEIPT FOR FILING OF PAPERS**

Appendix A

Mail Room (Regular Delivery)

The following papers have been filed:

App Trans; chk 143633 (\$912); 88 pp spec/29 claims/abstract; 18 pp draw (Figs. 1-24B);  
exec Dec; Assn Trans; 143637 (\$40); cert copy JP 2002-196291(P) (July 4, 2002)

Name of Applicant: Tatsuo KOBAYASHI

Serial No.: 2002-196291(P)

Atty. File No.: 116378

Title (New Cases): INTERNAL COMBUSTION ENGINE OF COMPRESSING AND  
AUTO-IGNITING AIR-FUEL MIXTURE AND METHOD OF  
CONTROLLING SUCH INTERNAL COMBUSTION ENGINE

Sender's Initials: JAO/bmr

**NEW APPLICATION**



298/10

**PATENT OFFICE DATE STAMP**

**COPY TO BE STAMPED BY PATENT OFFICE  
AND RETURNED BY MESSENGER**

Appendix B



PTO RECEIPT FOR FILING OF PERS



► Mail Room (Regular Delivery)

The following papers have been filed:  
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Sender's Initials: JAO/bmr

ASSIGNEE: Toyota Jidosha Kabushiki Kaisha